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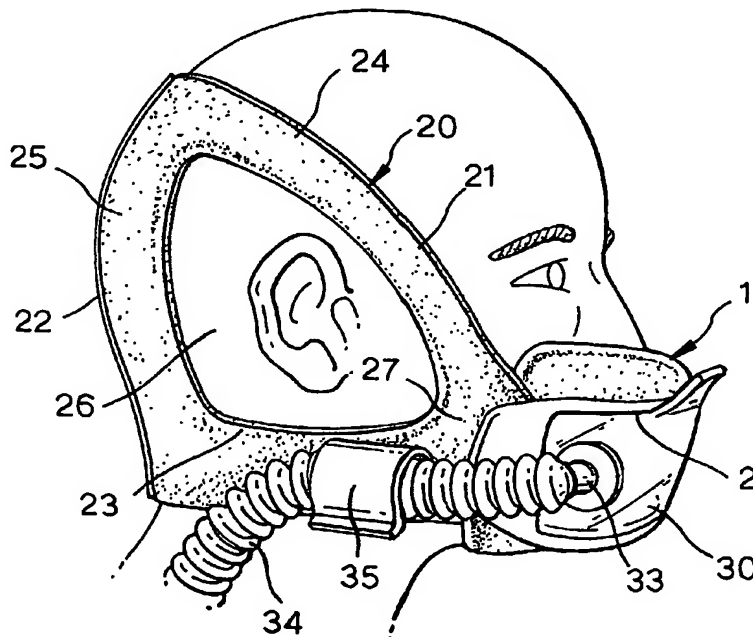
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(54) Title: MASK APPARATUS



(57) Abstract: A face mask comprises a sealing collar (1) extending around the mouth with a shelf (4) extending under the nose supporting a gel insert (7) that makes sealing contact between the nostrils and a passage (6) through the shelf. A curved, rigid window (30) is a push fit in a central opening (2) of the collar (1) and has a gas inlet (33) attached with it so that the window can be removed or connected with the sealing collar as necessary. The collar (1) supported on the head by a harness (20) having two triangular portions (21) on opposite sides encircling respective ears.

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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 25410 A (CROWE LOUIS MICHAEL ;MEDISOLVE LIMITED (IE)) 27 May 1999 (1999-05-27) page 15, line 17 -page 16, line 2 page 10, paragraph 3 -page 11, paragraph 1 ---	1-4,8-10
X	US 5 265 595 A (RUDOLPH KEVIN A) 30 November 1993 (1993-11-30) column 4, line 44 - line 51 column 5, line 24 - line 56 figures 1-3 ---	1,2,4-6, 8-10
X	US 3 357 426 A (COHEN DAVID D) 12 December 1967 (1967-12-12) column 3, line 2 -column 4, line 17 figures 1,5 --- -/--	1-4,8-10

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 931 356 A (HERMANN SCHWARZ KARL) 5 April 1960 (1960-04-05) column 4, line 48 - line 55; figures 1,3 ---	1-4,8,9
P,X	US 2002/185134 A1 (BISHOP GILES ANDREW) 12 December 2002 (2002-12-12) the whole document ---	1-4,10
A	US 5 752 510 A (GOLDSTEIN JOSEPH) 19 May 1998 (1998-05-19) column 4, line 34 - line 40; figure 2 ---	5-7
A	WO 02 11804 A (MALLINCKRODT INC) 14 February 2002 (2002-02-14) the whole document -----	1

INTERNATIONAL SEARCH REPORT
information on patent family members

International Application No
PCT/GB 03/00907

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9925410	A	27-05-1999	AU 1171299 A WO 9925410 A1	07-06-1999 27-05-1999
US 5265595	A	30-11-1993	NONE	
US 3357426	A	12-12-1967	NONE	
US 2931356	A	05-04-1960	NONE	
US 2002185134	A1	12-12-2002	DE 10224067 A1 FR 2825639 A1 GB 2379886 A	12-12-2002 13-12-2002 26-03-2003
US 5752510	A	19-05-1998	AU 5177798 A EP 1019128 A1 US 6012455 A WO 9820924 A1	03-06-1998 19-07-2000 11-01-2000 22-05-1998
WO 0211804	A	14-02-2002	US 6530373 B1 CA 2418148 A1 EP 1305069 A2 WO 0211804 A2	11-03-2003 14-02-2002 02-05-2003 14-02-2002